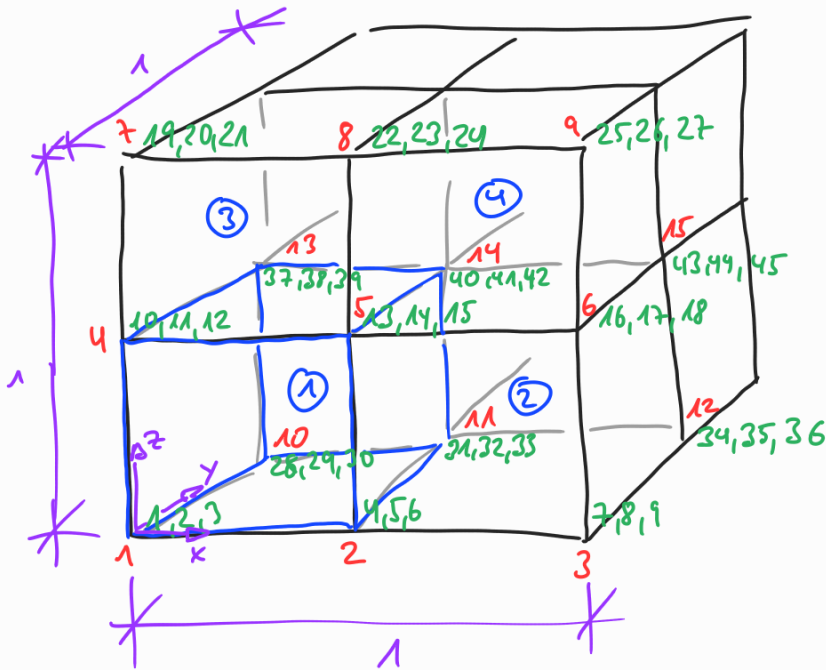


3D - Würfel:



Element: ① von 8

Knottennummern: (insgesamt 27)

1 2 5 4 10 11 14 13

Knottenfreiheitsgrade: (insgesamt 81)

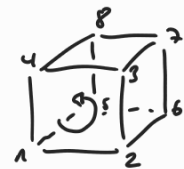
12 3 4 5 6 13 14 15 10 11 12

28 29 30 31 32 33 40 41 42 37 38 39

Object:

$$* \text{obj. nodes} = \text{Knotten-Nr} \begin{matrix} & x & y & z \\ 1 & 0 & 0 & 0 \\ 2 & 0.5 & 0 & 0 \\ 3 & 1 & 0 & 0 \\ \vdots & \vdots & \vdots & \vdots \end{matrix}$$

$$* \text{obj. edof} = \text{Element-Nr} \begin{matrix} & \text{Knotten Nr} \\ 1 & 1 & 2 & 5 & 4 & 10 & 11 & 14 & 13 \\ 2 & \vdots & \vdots & \vdots & \vdots & \vdots & \vdots & \vdots & \vdots \\ \vdots & \vdots & \vdots & \vdots & \vdots & \vdots & \vdots & \vdots & \vdots \end{matrix}$$



$$* \text{obj. globalFullEdof} = \text{Element-Nr} \begin{matrix} & \text{Knotten Nr} & & & & & & & \\ & x & y & z & x & y & z & 3 & \dots \\ 1 & 1 & 2 & 3 & 4 & 5 & 6 & 13 & 14 & 15 & \dots \\ 2 & \vdots & \vdots & \vdots & \vdots & \vdots & \vdots & \vdots & \vdots & \vdots & \vdots \\ \vdots & \vdots & \vdots & \vdots & \vdots & \vdots & \vdots & \vdots & \vdots & \vdots & \vdots \end{matrix}$$

$$* \text{obj. globalNodesDof} = \text{Knotten Nr} \begin{matrix} & \text{FHG} & & & \\ & x & y & z \\ 1 & 1 & 2 & 3 \\ 2 & 4 & 5 & 6 \\ 3 & 7 & 8 & 9 \\ \vdots & \vdots & \vdots & \vdots \end{matrix}$$

* Freiheitsgrade: (alle Struktur von obj. nodes):

o Verschiebungen: $q_U = q^{(n)}$, $q_{U1} = q^{(n+1)}$, $q_R = q^{(0)}$ (Referenz $\rightarrow \hat{=}$ obj. nodes)

o Geschwindigkeit: $v_U = v^{(n)}$, $v_{U1} = v^{(n+1)}$

o interne FHGs (gemischt, visko, ...): $q_U = \alpha^{(n)}$, $q_{U1} = \alpha^{(n+1)}$